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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/587,092

05/31/2000

Steven R. Hoffman

VISAP026

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7590

05/23/2006

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EXAMINER

BORLINGHAUS, JASON M

ART UNIT

PAPER NUMBER

3628

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/587,092	<b>Applicant(s)</b> HOFFMAN ET AL.	
	<b>Examiner</b> Jason M. Borlinghaus	<b>Art Unit</b> 3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,7-9,11,12,14,15 and 23-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7-9,11,12,14,15 and 23-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

**Claims 7, 11, 14 and 23** are objected to because of the following informalities: improper grammar. Claims 7, 11, 14 and 23 refer to “an Short Message Service (SMS) message” or a “an SMS message” (emphasis added). Correct grammar dictates “a Short Message Service (SMS) message” or “a SMS message.”

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1, 4 – 5, 8 - 9, 12, 15 and 24 – 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rankl (Rankl, W. & Effing, W. *Smartcard Handbook*. John

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*Wiley & Sons*. West Sussex, England. 1997. pp. 21 – 23, 336 – 337, 343 – 345 and 363 – 364).

**Regarding Claims 1**, Rankl discloses a smart card loading system for loading value over a telecommunications network onto a smart card (Mondex purse) said smart card loading system (“This technique naturally allows the loading of the purse over the phone, or a transaction between two cardholders.” – see p. 344) comprising:

- a smart card (Mondex purse – see pp. 343 - 344);
- a telephone handset (telephone with a built-in card reader) in communication with said telecommunications network. (“It allows money to be transferred over the line during the call.” – see p. 344 – establishing that the handset is in communication with said telecommunications network);
- a smart card reader (telephone with a built-in card reader) for communicating with a said smart card when said smart is inserted in said handset. (see p. 344); and
- an input interface (see wallet, figure 12.16, p. 344) for indicating a value to be loaded onto said smart card (It would be inherent that an input interface exists to indicate a value to be loaded onto said smart card as the need for such an input interface was recognized for the related smart card loading system, the Mondex wallet. – “The amount to be transferred is input...” – see p. 344);

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- said handset being arranged to generate a message request to load (credit) said value (sum) onto said smart card. (“value transfer” phase requesting sum – see p. 346) and to load (credit) said value (sum) onto said smart card (“The amount is now credited.” – see p. 346. “When loading the card from a bank account...” – see p. 344);
- a fund issuer computer arranged to receive said request message and to debit a consumer account with said smart card. (“When loading the card from a bank account...” – see p. 344); and
- whereby said smart card may be authorized to load said value via said telephone handset. (supra, see p. 344).

Rankl also discloses a smart card loading system for loading value over a network onto a smart card (inter-sector electronic purse) said smart card loading system comprising (see pp. 336 – 337):

- a smart card (inter-sector electronic purse – see p. 336);
- a fund issuer computer (PPSAM) arranged to receive said request message (first purse instruction). (see p. 337);
- an authentication computer (PPSAM) arranged to receive said request message and to authenticate said smart card (authenticate signature  $S_1$  – see p. 337);
- whereby said smart card may be authorized to load said value via said terminal. (“Again, this only relays the data to the card, this time with the instruction CREDIT IEP.” – see p. 337).

Rankl also discloses a wireless system (GSM Network) comprising:

- a mobile telephone handset (see mobile equipment, figure 13.2, p. 363) in communication with said telecommunications network;
- said handset including a subscriber identification module (see SIM, figure 13.2, p. 363) that is separate from said smart card and functions to allow a user to access telecommunications network. ("The SIM's task is to permit network access only to authorized persons..." – see p. 364);
- a gateway computer (mobile services switching center – see p. 363) arranged to receive said message from said handset over said telecommunications network and retransmit (forwarding) said message; and
- wherein said telecommunications network is a wireless network (see common air interface, see figure 13.2, p. 363).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the telephone smart-card loading system (Mondex system), as disclosed by Rankl, by incorporating the standard computer network and protocols for smart-card transactions, as disclosed by Rankl, to allow the telephone smart-card loading system to take advantage of the benefits of the standard computer system for such transactions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the telephone smart-card loading system, as disclosed by Rankl, by incorporating wireless technology (GSM network) and

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technology for utilization of such technology (mobile services switching center), as disclosed by Rankl, to allow the telephone smart-card loading system to function anywhere that wireless communication is possible.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the telephone smart-card loading system, as disclosed by Rankl, by incorporating SIMs, as disclosed by Rankl, as SIM can be utilized to provide further data storage and security functions for the transaction.

**Regarding Claim 4**, Rankl discloses a smart card loading system wherein:

- said authentication computer (PPSAM) authenticates said smart card (inter-sector electronic purse) using a first cryptographic signature (signature  $S_1$ ) and generates a second cryptographic signature (signature  $S_2$ ) to authenticate a load response (CREDIT IEP), whereby said transaction is secure. (see p. 337).

**Regarding Claim 5**, Claim 5 recites similar limitations to Claims 1 and 4, in combination, and is therefore rejected using the same art and rationale as applied in the rejection of Claims 1 and 4, in combination. Claim 5 differs from Claims 1 and 4 in that Claim 5 is for a smart card loading system further comprising:

- the smart card is able to be removed from the handset to interface with a point-of-sale terminal through a contact interface with the point-of-sale terminal.

Rankl discloses a smart-card loading system further comprising:

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- the smart card is able to be removed from the telephone handset to interface with a point-of sale terminal (trader terminal) (pp. 344 – 345); and
- the smart card is able to interface with a point-of sale terminal through a contact interface with the point-of-sale terminal. (pp. 21 – 23).

**Regarding Claim 8**, Rankl discloses a smart-card loading system:

- wherein in response to a successful load (confirm successful updating), said handset (terminal) is arranged to generate a transaction certificate (signature  $S_3$ ) to be used for irrepudiation. (see p. 337).

**Regarding Claim 9**, Claim 9 recites similar limitations to Claims 1, 4 and 5, in combination, and is therefore rejected using the same art and rationale as applied in the rejection of Claims 1, 4 and 5, in combination.

**Regarding Claim 12**, Claim 12 recites similar limitations to Claims 1, 4 and 5, in combination, and is therefore rejected using the same art and rationale as applied in the rejection of Claims 1, 4 and 5, in combination.

**Regarding Claim 15**, Claim 15 recites similar limitations to Claim 8 and is therefore rejected using the same art and rationale as applied in the rejection of Claim 8.

**Regarding Claim 24**, Rankl discloses a method further comprising:

- removing said smart card from said handset (“telephone with built-in card reader” following value-loading). (see p. 344);
- placing said removed smart card (“the Smart Card”) into association with a smart card reader (“the wallet”). (see p. 344); and



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- using said smart card reader (“the wallet”) to debit said smart card to perform a purchase. (see p. 344).

**Regarding Claim 25**, Claim 25 recites similar limitations to Claims 1, 4 and 5, in combination, and is therefore rejected using the same art and rationale as applied in the rejection of Claims 1, 4 and 5, in combination.

**Claims 7, 11, 14 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rankle, as applied to Claims 1, 5, 9 and 12 above, and further in view of Admission (applicant’s arguments filed 2/17/06, p. 10) and Manterfield (Manterfield, Richard. *Telecommunications Signalling. Institution of Electrical Engineers*. London, England. January 1, 1999. p. 141).

**Regarding Claim 7**, Rankl discloses a smart card loading system wherein:

- said authentication response certificate (cryptographic “signature  $S_2$ ”) is implemented within a telecommunications network. (see pp. 336 – 337).

Rankl does not teach the underlined limitations – a smart card loading system wherein:

- said authentication response certificate is implemented as an alphanumeric message integrated within a Short Message Service (SMS) message of said telecommunications network.

Utilization of the Short Message Service channel for transmission of data or messages is old and well known in the art of telecommunications and mobile system

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design, as evidenced by Admission (see p. 10). Furthermore, Short Message Service (SMS) carries alphanumeric messages, as evidenced by Manterfield (see p. 141).

It would have been obvious to one of ordinary skill at the time the invention was made to have modified Rankl to allow for any existing data transmission standard, such as Short Message Service, to be utilized as that the inventor desired for transmission of the authentication response certification. *In re Kuhle*, 526 F.2d 553, 555, 188 USPQ 7, 9 (CCPA 1975).

Furthermore, as Short Message Service, by its nature, is utilized to transmit alphanumeric messages, as disclosed by Manterfield, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Rankl to allow for transmission of the authentication response certification as an alphanumeric message, as disclosed by Manterfield, allowing the certification to be transmitted via Short Message Service.

**Regarding Claim 11**, Claim 11 recites similar limitations to Claim 7 and is therefore rejected using the same art and rationale as applied in the rejection of Claim 7.

**Regarding Claim 14**, Claim 14 recites similar limitations to Claim 7 and is therefore rejected using the same art and rationale as applied in the rejection of Claim 7.

**Regarding Claim 23**, Rankl discloses a smart card loading system wherein:

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- a telephone handset acting as a value-loading terminal (“telephone with a built-in card reader”) intended for said smart card (“electronic purse”). (see p. 344);
- a chip command (“signature  $S_2$ ...[and]...key information  $IK_{PPSAM}$ ”) generated remotely from a value-loading terminal (“PPSAM...sends it to the terminal”) and intended for said smart card (“IEP electronic purse”). (see pp. 336 – 337); and
- mobile telephone handset (“mobile equipment”) receiving chip commands (information “arriving over the network and stored in the SIM”) remotely from the mobile telephone handset (“base station system” or “switching station”). (see pp. 363 – 364).

Rankl does not disclose underlined limitations – a smart card loading system wherein:

- a chip command generated remotely from a mobile telephone handset and intended for said smart card is implemented as an alphanumeric message and is integrated within an SMS message of said telecommunications network.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the telephone smart-card loading system, as disclosed by Rankl, by incorporating wireless technology, as disclosed by Rankl, to allow the telephone smart-card loading system to function anywhere that wireless communication is possible.

Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the telephone smart-card loading device mobile since it has been held that making an old device or movable without producing any new and unexpected result involves only routine skill in the art. *In re Lindberg*, 93 USPQ 23 (CCPA 1952).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the mobile telephone handset, as disclosed by Rankl, through the receipt of chip commands generated remotely from the smart-card loading terminal, as disclosed by Rankl, as chip commands, such as value-loading authorization and value-loading initialization, generated remotely would enhance system security. Chip commands generated locally could be compromised and/or fraudulently generated through tampering with the local device, in contrast to more secure chip commands created remotely from the value-loading device. Furthermore, as value loaded onto the smart card originates from transmissions of the user's bank communicated via a network to the telephone handset device, such remotely generated chip commands would obviously be generated at that location, at the source of the smart card funds, and remotely from the telephone handset device (see Fig. 12.15).

Utilization of the Short Message Service channel for transmission of data or messages is old and well known in the art of telecommunications and mobile system design, as evidenced by Admission (see p. 10). Furthermore, Short Message Service (SMS) carries alphanumeric messages, as evidenced by Manterfield (see p. 141).

It would have been obvious to one of ordinary skill at the time the invention was made to have modified Rankly to allow for any existing data transmission standard, such as Short Message Service, to be utilized as that the inventor desired for transmission of the authentication response certification. *In re Kuhle*, 526 F.2d 553, 555, 188 USPQ 7, 9 (CCPA 1975).

Furthermore, as Short Message Service, by its nature, is utilized to transmit alphanumeric messages, as disclosed by Manterfield, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Rankl to allow for transmission of the authentication response certification as an alphanumeric message, as disclosed by Manterfield, allowing the certification to be transmitted via Short Message Service.

### ***Response to Arguments***

Applicant's arguments filed 2/17/06 have been fully considered but they are not persuasive in part and persuasive in part.

**In response to applicant's piecemeal analysis of the references**, "one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references." *In re Keller*, Terry, and Davies, 208 USPQ 871, 882 (CCPA 1981).

In the instant case, the applicant asserts that the examiner used Rankl to "show three separate smart-card technologies." (see applicant's arguments, p. 8). Examiner will adhere to applicant's identification of the three smart card technologies as (1) the

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Mondex system, (2) the inter-sector electronic purse and (3) the GSM network.

Applicant desires to distinguish the instant application from the cited art through distinguishing the three technologies individually, not through consideration of the teachings of the three smart card technologies together.

Rankl's discussion of the Mondex system discloses a smart-card operating with a telephone possessing a smart card-reader, the telephone communicating with a telecommunications network and loading value upon the smart-card. (see Rankl, pp. 343 – 345).

Rankl's discussion of the inter-sector electronic purse discloses the programming intricacies of smart-card transactions, such as authentication and value-loading protocols. (see pp. 336 – 337).

Furthermore, examiner wishes to remark that the term "inter-sector electronic purse" is being utilized in Rankl as a generic term to discuss electronic purse technology in general as "the process described here is common in current systems" (see p. 337, lines 1 – 2), and the Mondex system is merely a specific real-world implementation of the inter-sector purse concept, as Rankl refers to the Mondex system as "an electronic purse". (see p. 344, line 1). Therefore, the disclosed protocols and general method of operation of an inter-sector electronic purse, a generic electronic purse, are applicable to a real-world electronic purse, such as the Mondex system.

Applicant distinguishes the Mondex system and the inter-sector electronic purse from the instant application, as neither Rankl's discussion of the Mondex system nor the inter-sector purse teach a mobile telephone nor said mobile telephone utilizing a SIM.

However, Rankl's discussion of the GSM network discloses a mobile telephone that incorporates a subscriber identification module (SIM). (see pp. 362 – 364).

Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the telephone smart-card loading system utilized by the Mondex system, as disclosed by Rankl, by incorporating wireless technology, such a mobile telephone and SIMs, as disclosed by Rankl, to allow the telephone smart-card loading system to function anywhere that wireless communication is possible.

Examiner would like to additionally assert that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the telephone smart-card loading device mobile since it has been held that making an old device or movable without producing any new and unexpected result involves only routine skill in the art. *In re Lindberg*, 93 USPQ 23 (CCPA 1952).

Authentication, authorization and/or security protocols are key in value-transfer transactions, in general, and smart-card transactions, specifically. Rankl discloses entering "a four-figure PIN...for security reasons" during smart-card transactions and smart-card devices possessing a "security module." (see p. 344).

Therefore, examiner asserts that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the mobile telephone smart-card loading system, as disclosed by Rankl, by incorporating SIMs, as disclosed by Rankl, as SIMs are utilized "for authenticating mobile stations." (see p. 363).

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**In response to applicant's argument concerning Claims 7, 11, 14 and 23**, the applicant argues that prior art does not teach or suggest all claim limitations. Examiner assumes the applicant means to address Claims 7, 11, 14 and 23, as currently amended, as such limitations were only just incorporated into Claims 7, 11, 14 and 23, and were not present when originally rejected. Such new claim limitations are addressed above with application of new prior art references.

**In response to applicant's argument concerning incorporation of essential material**, examiner rescinds his previous objection, as applicant clarified that the applicant is "not claiming to have invented any particular cryptographic technique not is claiming a cryptographic technique" but sought to merely establish a baseline for "the state of the art at the time of Applicant's invention." (see applicant's argument filed 2/17/06, p. 10)

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the



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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Borlinghaus whose telephone number is (571) 272-6924. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (571) 272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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